Notice of Allowability	Application No.	Applicant(s)	
	09/802,208	PARROTT ET AL.	
	Examiner	Art Unit	
	Ashwin Mehta	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *papers filed 12/3/2003*.

2. ☒ The allowed claim(s) is/are *1,3-13 and 19-29*.

3. ☒ The drawings filed on *08 March 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *2172004* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Claim Rejections

1. The rejection of claims 1, 2, and 13-15 under 35 U.S.C. 101 is withdrawn, in light of the claim amendments.

2. The rejection of claims 2-12 under 35 U.S.C. 112, 2nd paragraph, is withdrawn in light of the claim amendments or cancellations.

3. The rejections of claims 1-13 under 35 U.S.C. 112, 1st paragraph, are withdrawn in light of the claim amendments.

4. The rejection of claims 1-3, 5, 6, and 10-13 are rejected under 35 U.S.C. 102(b) is withdrawn in light of the claim amendments.

Examiner's Amendment

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Timothy Van Dyke on February 17, 2004.

The application has been amended as follows:

In the claims:

1. An isolated polynucleotide molecule comprising at least one gene of interest, and at least one selectable marker gene, wherein said at least one selectable marker gene comprises a nucleotide sequence which selectively hybridizes under high stringency conditions to the complement of a nucleotide sequence shown in SEQ ID NO: 2, [or a plant optimized version thereof,] wherein said nucleotide sequence encodes for a protein possessing ribitol dehydrogenase enzymatic activity and a protein possessing ribitol kinase enzymatic activity, and wherein said high stringency conditions comprise 50% formamide, 1M NaCl, 1% SDS at 37°C, and a wash in 01.X SSC at 65°C.

5. The transgenic cells of claim 3, wherein said transgenic cells comprise bacteria, fungi, yeast, plant or a combination thereof, and wherein codons of said nucleotide sequence are substituted with preferred codons [is optimized] for expression in said cells.

7. A method of selecting transformed cells from a population of cells comprising

a) introducing into the genome of a cell a gene of interest and a selectable marker gene;

b) obtaining transformed cells;

c) supplying to the population of cells a marker compound wherein said transformed cells have a selective advantage over non-transformed cells due to expression or transcription of the [the] selectable marker gene in the presence of the marker compound; and

d) selecting said transformed cells from the population of cells;

wherein said selectable marker gene comprises a nucleotide sequence selected from the group consisting of:

a nucleotide sequence which selectively hybridizes under high stringency conditions to the complement of a nucleotide sequence shown in SEQ ID NO: 2, [or a plant optimized version thereof,] wherein said nucleotide sequence encodes a protein that possesses ribitol dehydrogenase enzymatic activity and a protein that possesses ribitol kinase enzymatic activity and said marker compound comprises arabitol, ribitol, or mannitol, and wherein said high stringency conditions comprise 50% formamide, 1M NaCl, 1% SDS at 37°C, and a wash in 01.X SSC at 65°C [marmitol].

8. The method of claim 7, wherein said cells comprise bacteria, fungi, yeast, plant, or a combination thereof, and wherein codons of said nucleotide sequence are substituted with preferred codons [optimized] for expression in said cells.

13. An isolated polynucleotide molecule comprising a nucleotide sequence which selectively hybridizes under high stringency conditions to the complement of [a plant optimized version of] the nucleotide sequence shown in SEQ ID NO: 2, and wherein said nucleotide sequence encodes for a protein possessing ribitol dehydrogenase activity and a protein possessing ribitol kinase activity, and wherein said high stringency conditions comprise 50% formamide, 1M NaCl, 1% SDS at 37°C, and a wash in 01.X SSC at 65°C.

Claims 16-18 were cancelled.

20. An isolated polynucleotide molecule comprising at least one gene of interest, and at least one selectable marker gene, wherein said at least one selectable marker gene comprises a nucleotide sequence which selectively hybridizes under high stringency conditions to the complement of a nucleotide sequence shown in SEQ ID NO: 1, [or a plant optimized version thereof,] wherein said at least one selectable marker gene encodes for a protein possessing arabitol dehydrogenase enzymatic activity, and wherein said high stringency conditions comprise 50% formamide, 1M NaCl, 1% SDS at 37°C, and a wash in 01.X SSC at 65°C.

21. A method of selecting transformed cells from a population of cells comprising

a) introducing into the genome of a cell a gene of interest and a selectable marker gene;

b) obtaining transformed cells;

c) supplying to the population of cells a marker compound wherein said transformed cells have a selective advantage over non-transformed cells due to expression or transcription of the selectable marker gene in the presence of the marker compound; and

d) selecting said transformed cells from the population of cells;

wherein said selectable marker gene comprises a nucleotide sequence which selectively hybridizes under high stringency conditions to the complement of a nucleotide sequence shown in SEQ ID NO: 1, [or a plant optimized version thereof,] and encodes a protein having arabitol dehydrogenase enzymatic activity; and wherein said marker compound is arabitol, and wherein said high stringency conditions comprise 50% formamide, 1M NaCl, 1% SDS at 37°C, and a wash in 01.X SSC at 65°C.

The following new claims were added:

25. (New) The isolated polynucleotide molecule of claim 1, wherein codons of the nucleotide sequence that hybridizes to the complement of the nucleotide sequence of SEQ ID NO: 2 are substituted with plant preferred codons.

26. (New) The method of claim 7, wherein codons of the nucleotide sequence that hybridizes to the complement of the nucleotide sequence of SEQ ID NO: 2 are substituted with plant preferred codons.

27. (New) The isolated polynucleotide molecule of claim 13, wherein codons of the nucleotide sequence that hybridizes to the complement of the nucleotide sequence of SEQ ID NO: 2 are substituted with plant preferred codons.

28. (New) The isolated polynucleotide molecule of claim 20, wherein codons of the nucleotide sequence that hybridizes to the complement of the nucleotide sequence of SEQ ID NO: 1 are substituted with plant preferred codons.

29. (New) The method of claim 21, wherein codons of the nucleotide sequence that hybridizes to the complement of the nucleotide sequence of SEQ ID NO: 1 are substituted with plant preferred codons.

6. Claims 1, 3-13, and 19-29 are allowed.

Contact Information

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 571-272-0803. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 571-272-0804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

February 18, 2004

Ashwin D. Mehta, Ph.D.
Primary Examiner
Art Unit 1638